

Projection exposure method and system

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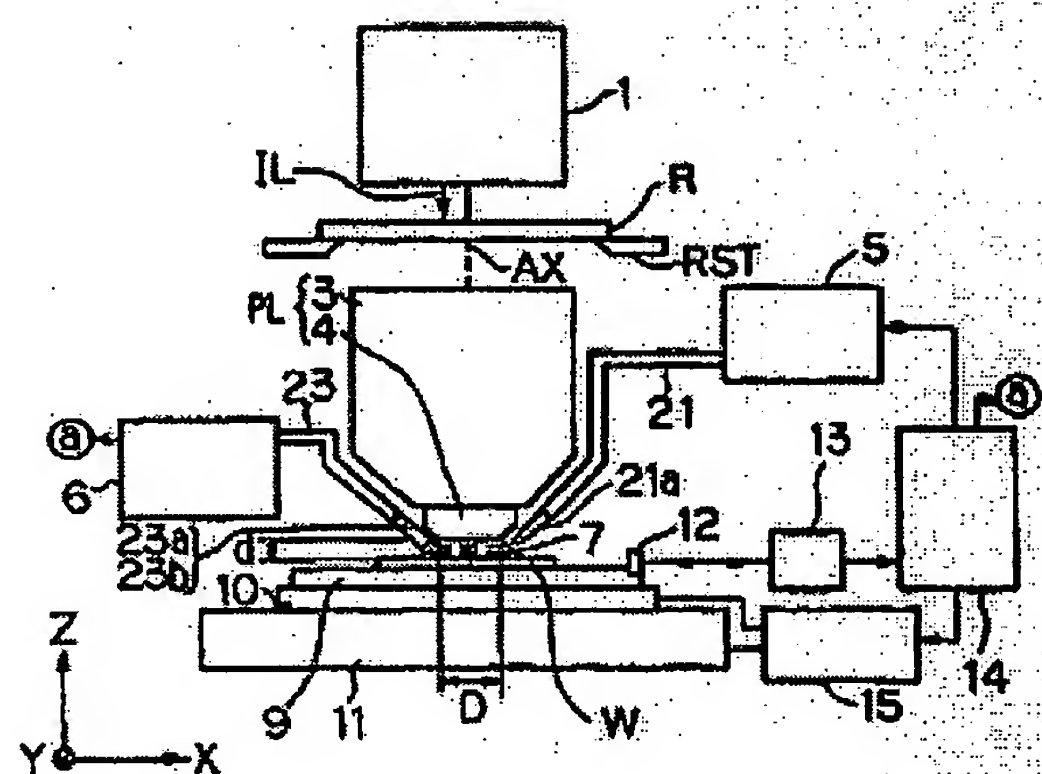
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Abstract not available for AU2747999

Abstract of corresponding document: **WO9949504**

A projection exposure method capable of keeping a liquid (7) filled between a projection optical system (PL) and a wafer (W) even while the wafer (W) is being moved when a liquid immersion method is used to conduct an exposure, wherein a discharge nozzle (21a) and inflow nozzles (23a, 23b) are disposed so as to hold a lens (4) at the tip end of the projection optical system (PL) in an X direction. When the wafer (W) is moved in a -X direction by an XY stage (10), a liquid (7) controlled to a preset temperature is supplied from a liquid supply device (5) via a supply pipe (21) and the discharge nozzle (21a) so as to fill the portion between the lens (4) and the surface of the wafer (W) and the liquid (7) is recovered from the surface of the wafer (W) by a liquid supply device (6) via a recovery pipe (23) and the inflow nozzles (23a, 23b), the supply amount and recovery amount of the liquid (7) being regulated according to a moving speed of the wafer (W).



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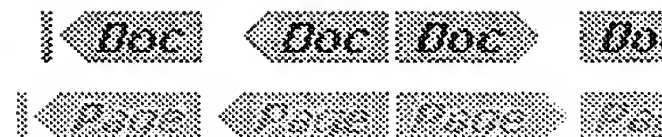
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(21) 国際出願番号 PCT/JP99/01262 (22) 国際出願日 1999年3月16日(16.03.99) (34) 優先権データ 特願平10/79263 1998年3月26日(26.03.98) JP (71) 出願人 (米国を除くすべての指定国について) 株式会社 ニコン(NIKON CORPORATION)[JP/JP] 〒100-8331 東京都千代田区丸の内三丁目2番3号 富士ビル Tokyo, (JP) (72) 発明者 ; および (75) 発明者/出願人 (米国についてのみ) 深谷義雄(FUKAMI, Yoshio)[JP/JP] 堀込伸貴(MAGOME, Nobutaka)[JP/JP] 〒100-8331 東京都千代田区丸の内三丁目2番3号 富士ビル 株式会社 ニコン 知的財産部内 Tokyo, (JP) (74) 代理人 弁理士 大森 聡(OMORI, Satoshi) 〒214-0014 神奈川県川崎市多摩区登戸2075番2-501 大森特許事務所 Kanagawa, (JP)	(81) 指定国 AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GR, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, 欧州特許 (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI特許 (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG), ARIPO特許 (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), ユーロパシヤ特許 (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM) 添付公開書類 国際調査報告書	
(54) Title: PROJECTION EXPOSURE METHOD AND SYSTEM (54) 発明の名称 投影露光方法及び装置 <div data-bbox="873 1570 1266 1884"> </div> <div data-bbox="591 1913 1546 2076"> <p>(57) Abstract</p> <p>A projection exposure method capable of keeping a liquid (7) filled between a projection optical system (PL) and a wafer (W) even while the wafer (W) is being moved when a liquid immersion method is used to conduct an exposure, wherein a discharge nozzle (21a) and inflow nozzles (23a, 23b) are disposed so as to hold a lens (4) at the tip end of the projection optical system (PL) in an X direction. When the wafer (W) is moved in a -X direction by an XY stage (10), a liquid (7) controlled to a preset temperature is supplied from a liquid supply device (5) via a supply pipe (21) and the discharge nozzle (21a) so as to fill the portion between the lens (4) and the surface of the wafer (W) and the liquid (7) is recovered from the surface of the wafer (W) by a liquid supply device (6) via a recovery pipe (23) and the inflow nozzles (23a, 23b), the supply amount and recovery amount of the liquid (7) being regulated according to a moving speed of the wafer (W).</p> </div>		